

Work Order ID 85383

85383

Page 1

June-07-12 9:24:54 AM

Item ID: D3560-041

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Arm Weldment

Start Date: 07/06/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 21/06/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/06/07 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3560

Rev D

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blanks 16.750" long

110

0.00

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1- Mill as per Folio FA693 Rev: AA & Dwg D3560 Rev: D
2-C'sink 0.196" hole on manual mill as per dwg D3560
3-Deburr per dwg D3560

120

0.00

120

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 85383

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Page 2

June-07-12 9:24:54 AM

Item ID: D3560-041

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N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Arm Weldment

Start Date: 07/06/2012 Start Qty: 6.00 ***6***

Cust Item ID:

Required Date: 21/06/2012 Req'd Qty: 6.00 ***6***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

QC8- Inspect parts - second check

0.00

130

and 12/06/20

6

0

QC

Memo

0.00

Quality Control

140

Large Fab

0.00

140

6

0

Large Fab

Memo

0.00

Large Fab

1-Weld assembly as per dwg D3560
STEP:
1- clean material (buff bracket and bottom of arm with blue pad)
2- set up bracket and arm on jig
3- preheat bracket and arm with torch
4- clean before welding with brush
5- set up machine to 135 amps
6- weld across bottom and top ends
7- reheat with torch (65 deg C)
8- on one side weld from bottom to top half way
9- same for other side (half way)
10- from half way point weld the rest of the first side (ease off pedal near end)
11- same for remaining side (ease off pedal near end)

Red # 123528

13.02.19

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

85383

Page 3

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 07/06/2012 **Start Qty:** 6.00

6

Cust Item ID:

Required Date: 21/06/2012 **Req'd Qty:** 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

[illegible]

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 85383

June-07-12 9:24:54 AM

85383

Page 4

Item ID: D3560-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Arm Weldment

Stop

NS2

Start Date: 07/06/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 21/06/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC3- Inspect Part Finish

0.00

180

QC

Memo

0.00

Quality Control

6x

3/02/20

190

Small Fab

0.00

190

Small Fab

Memo

0.00

Small Fab

1-Press bushing in D3560 arm per dwg D3562

6x

3/02/20

200

QC5- Inspect part completeness to step on W/O

0.00

200

QC

Memo

0.00

Quality Control

SM2
13.2.25

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 85383

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Page 5

June-07-12 9:24:54 AM

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Start Date: 07/06/2012 Start Qty: 6.00

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Cust Item ID:

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6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

210

Identify as per dwg & Stock Location: WMA.003 0.00

210

Packaging

Memo

0.00

Packaging

*** STOCK IN STEP CELL***

6 0 13-02-27

220

QC21- Final Inspection - Work Order Release 0.00

220

QC

Memo

0.00

Quality Control

MLJ 13-02-27
MF
13-2-27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-07-12 9:24:57 AM

Page 1

Work Order ID: 85383

85383

Parent Item: D3560-041

D3560-041

Parent Item Name: Arm Weldment

Start Date: 07/06/2012

Required Date: 21/06/2012

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP Rev:A New Issue 07.05.24 EC
IPP rev B ECN 987 07.10.09 EC verified by: DD
IPP Rev:C ECN1048 07-12-18 DD verified by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2808		Manufactured	No			100	Each	8.0000	1	6			
D2808									**				
Bushing													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				GA		8							
				32896		2							
				79688		6							
M6061T6B0.500X05.00 0		Purchased	No			140	f	66.2534	1.395	8.810526			

M6061T6B0 500X05 000

6061-T6 Bar .500 x 5.00

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT001	1.16	
119346	1.16	
MAT004	65.0934	
120243	0.2	
120421	2.5934	
120866	0.3	
121040	14	
121070	12	
121282	36	

B3/02/25
B82018
(62)

8.82 12/06/15

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Picklist Print

June-07-12 9:24:57 AM

Page 2

Work Order ID: 85383

85383

Parent Item: D3560-041

D3560-041

Parent Item Name: Arm Weldment

Start Date: 07/06/2012

Required Date: 21/06/2012

Start Qty: 6.00

Required Qty: 6.00

D3592-1

Manufactured No

190

Each

30.0000

1

6

D3592-1

Plate

**

13.02.19

Location

Loc Qty

Loc Code

WA

882022

28

80379

28

WA002

2

47015

2

6

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	85383
Description: Arm		Part Number:	D3560-1
Inspection Dwg: D3560 Rev: D		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.507	+0.000/-0.001	5065	/		DT 9526A	
Ø0.196	+0.005/-0.001	197	/		vern	SI-10
Ø1.000	+0.010/-0.001	1.005	/		"	
0.500	+/-0.010	496	/		"	
0.250	+/-0.010	251	/		"	
0.275	+/-0.010	275	/		"	
0.188	+/-0.010	186	/		mic	CNC 118-120
2.000	+/-0.010	2.000	/		vern	-
1.700	+/-0.010	1.699	/		"	
Ø0.385 x 100°	+/-0.010 x 0.5°	380x100°	/		"	
0.250 Deep	+/-0.010	251	/		"	

Measured by:	SL	Audited by:	anf	Prototype Approval:	N/A
Date:	12-06-20	Date:	12/06/20	Date:	N/A

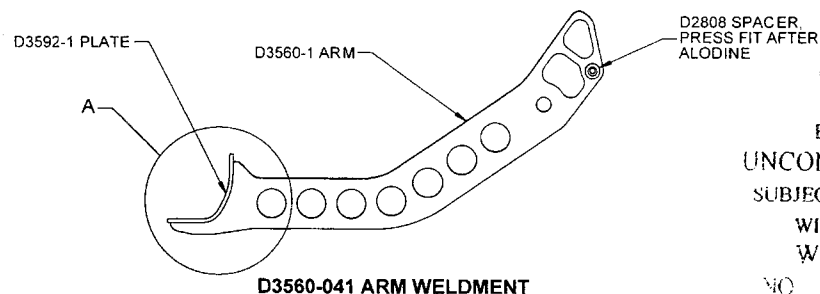
Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue P/O D3560-041	KJ/JLM	
B	07.06.13	Dimensions updated per Dwg Rev B	KJ/JLM	
C	08.07.24	Dwg Rev updated	KJ/DD	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">JF</div> <div style="border: 1px solid black; padding: 2px;">DD</div> </div>

RELEASED
27.12.16

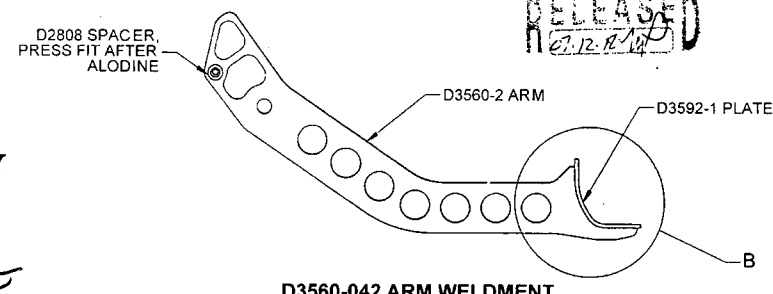
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO 85383 MLT

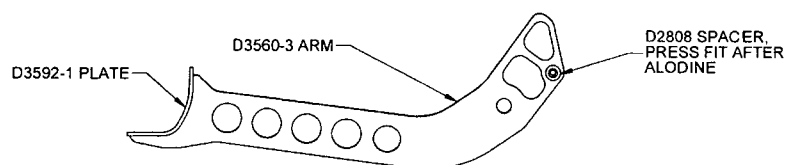
12/06/07



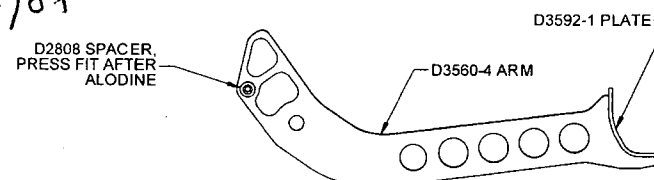
D3560-041 ARM WELDMENT



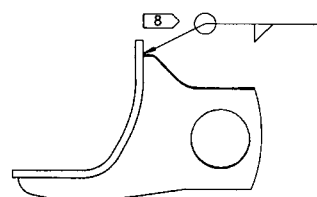
D3560-042 ARM WELDMENT



D3560-043 ARM WELDMENT



D3560-044 ARM WELDMENT



**DETAIL A
SCALE 1:2**

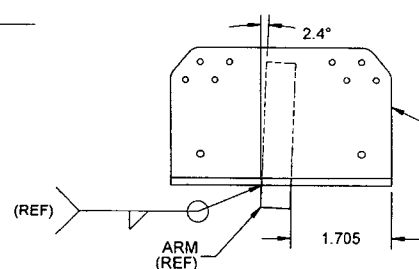
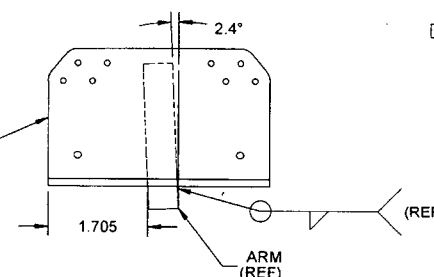


PLATE
(REF)



**DETAIL B
SCALE 1:2**

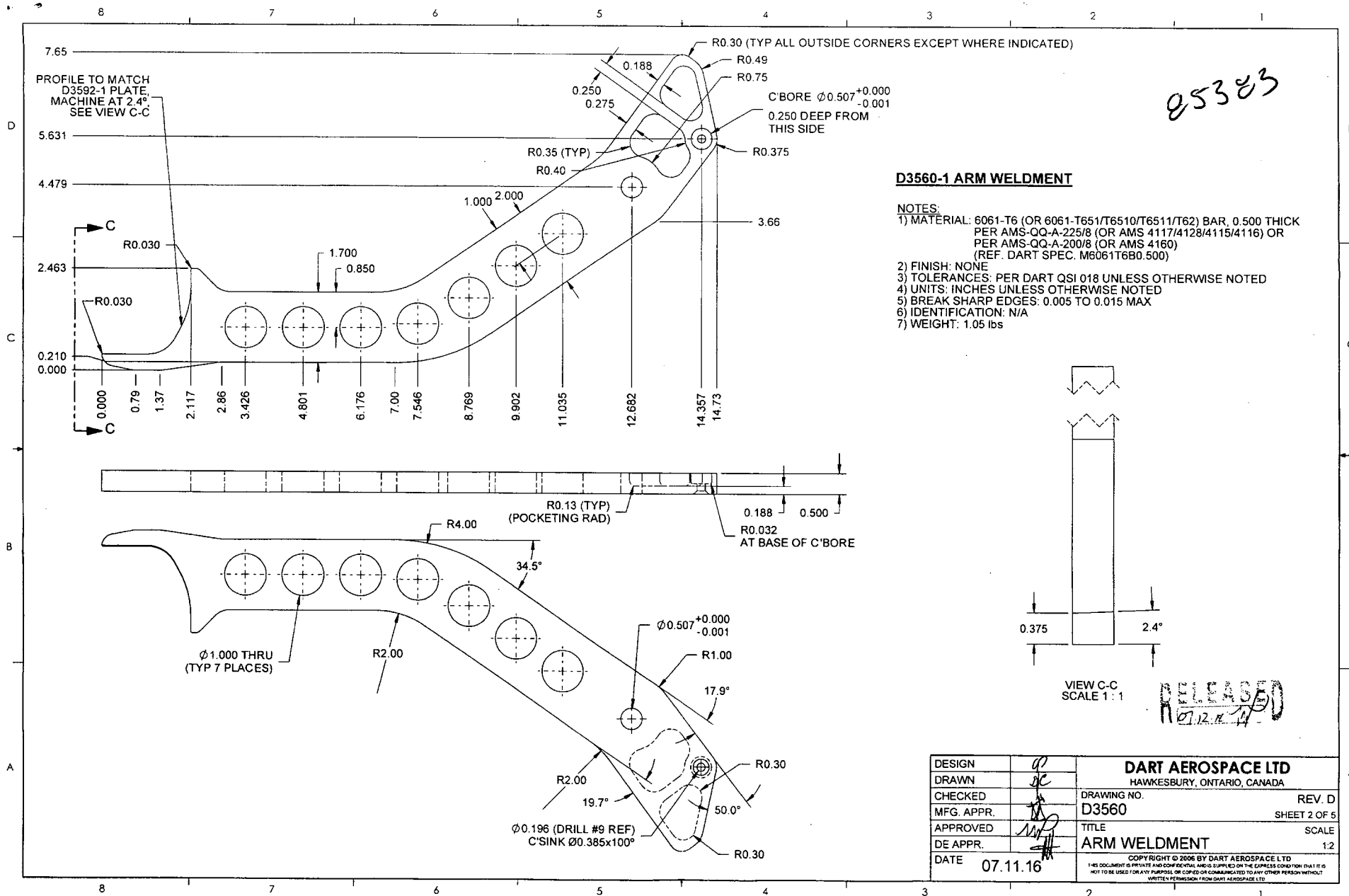
PARTS LIST

QTY -041	QTY -042	QTY -043	QTY -044	P/N	DESCRIPTION
X				D3560-041	ARM WELDMENT
	X			D3560-042	ARM WELDMENT
		X		D3560-043	ARM WELDMENT
			X	D3560-044	ARM WELDMENT
1	1	1	1	D2808	SPACER
1				D3560-1	ARM
	1			D3560-2	ARM
		1		D3560-3	ARM
			1	D3560-4	ARM
1	1	1	1	D3592-1	PLATE

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.23 lbs (TYP)
- 8) WELDING: PER DART QSI 004

D	ADD D2808 PRESS FIT NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
C	REMOVE POWDER COAT	CP	07.06.19
B	REDESIGN AS WELDMENT, ADD POCKETS	CP	07.01.15
A	NEW ISSUE	CP	06.09.25
REV.	DESCRIPTION	BY	DATE
DESIGN	LP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	LC		
CHECKED	JP	DRAWING NO.	REV. D
MFG. APPR.	JP	D3560	SHEET 1 OF 5
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	ARM WELDMENT	1:4
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMBINATION OF PURPOSES WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



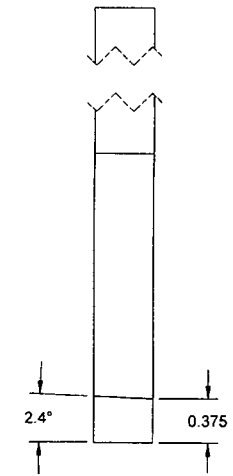
25383

RELEASED
07-12-18

PROFILE TO MATCH
D3592-1 PLATE,
MACHINE AT 2.4°,
SEE VIEW D-D

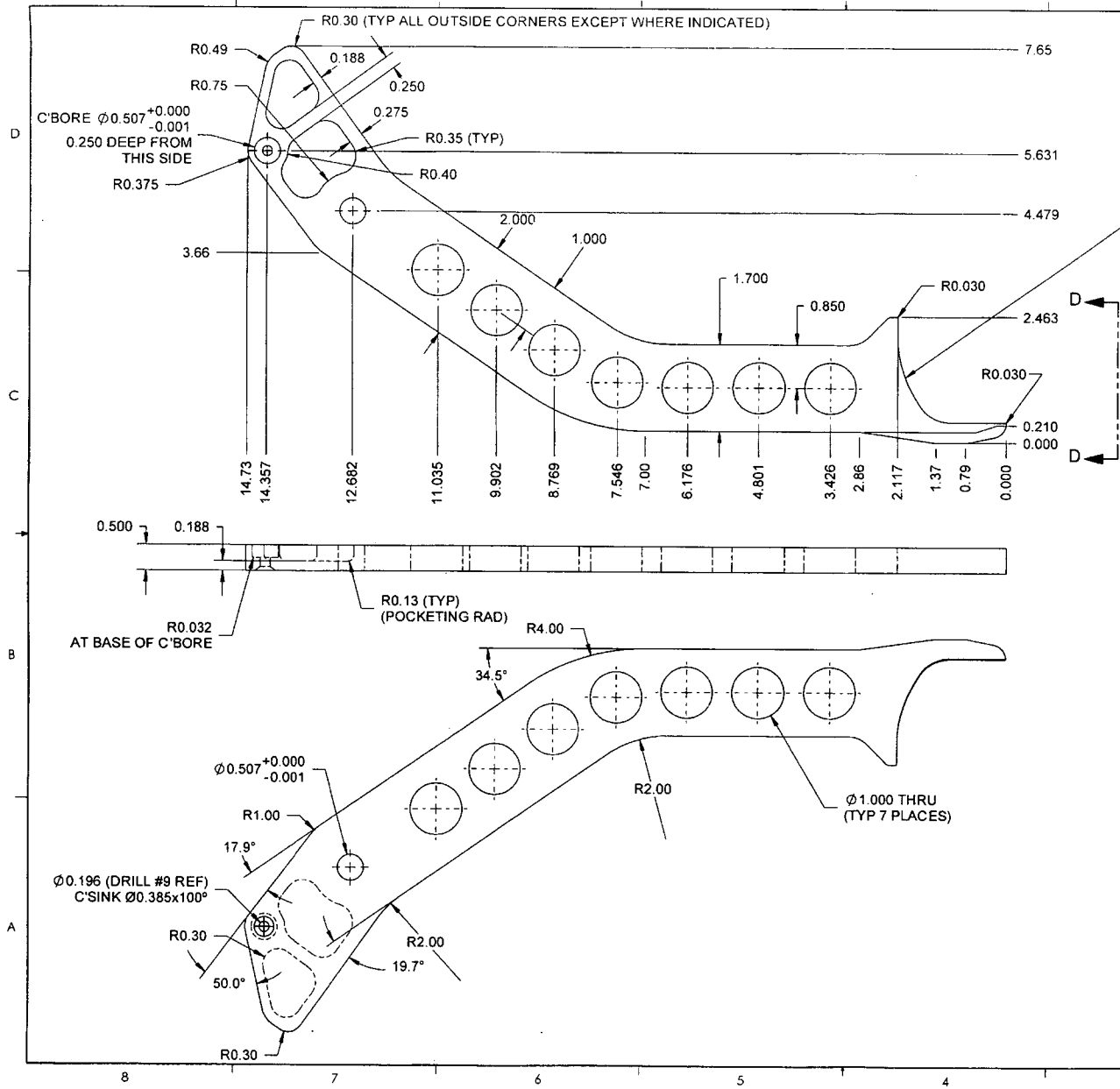
D3560-2 ARM

- NOTES:
- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.05 lbs



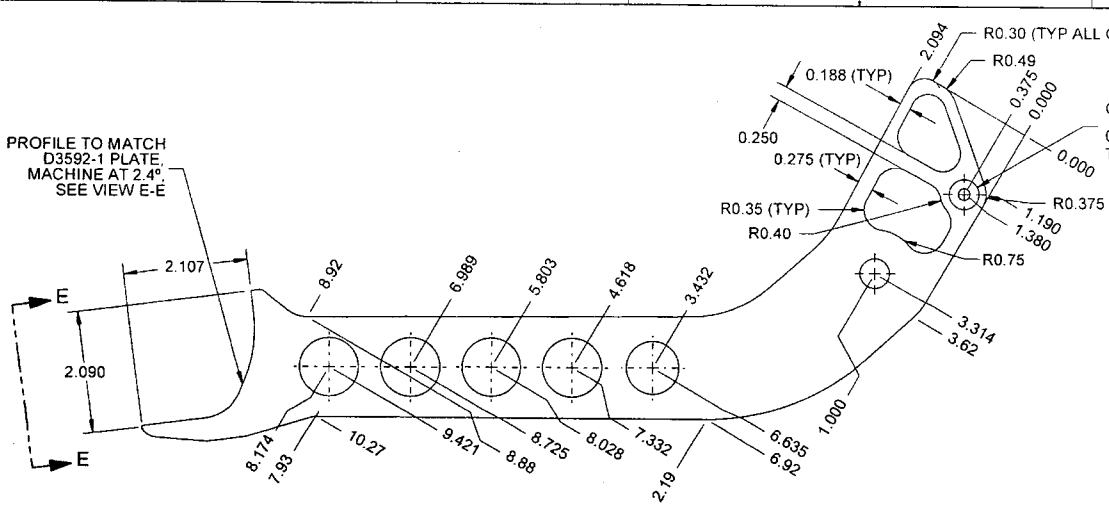
VIEW D-D
SCALE 1 : 1

DESIGN	GP	DART AEROSPACE LTD	
DRAWN	GC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	GC	DRAWING NO.	REV. D
MFG. APPR.	MP	D3560	SHEET 3 OF 5
APPROVED	MP	TITLE	SCALE
DE APPR.	MP	ARM WELDMENT	1:2
DATE	07.11.16	<small>COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	



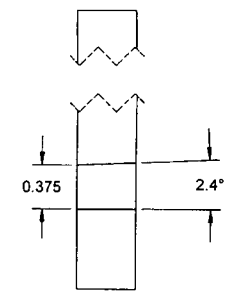
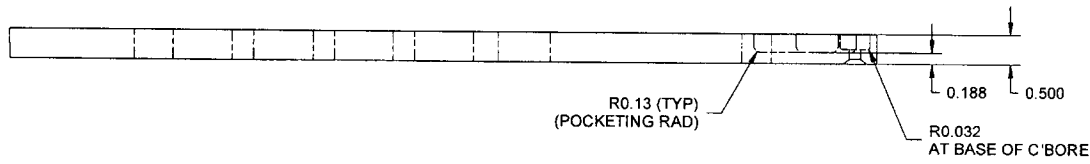
85383

PROFILE TO MATCH
D3592-1 PLATE.
MACHINE AT 2.4°
SEE VIEW E-E

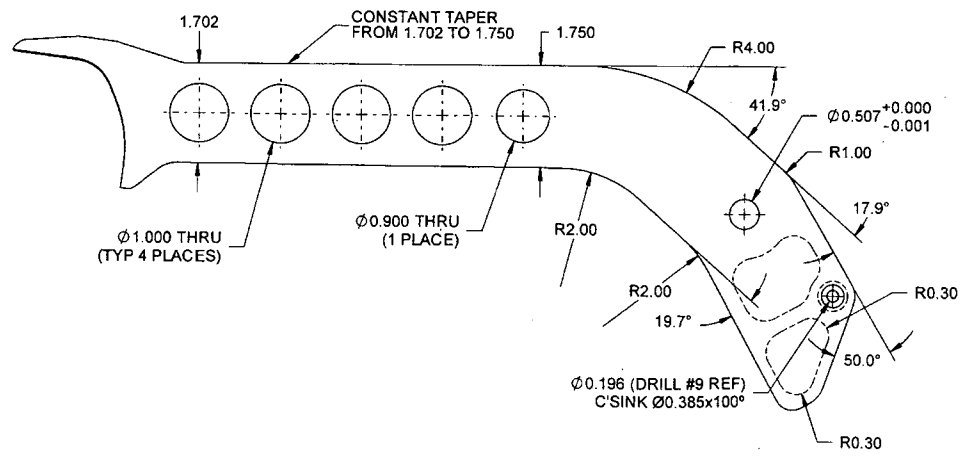


D3560-3 ARM

- NOTES:
- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.05 lbs

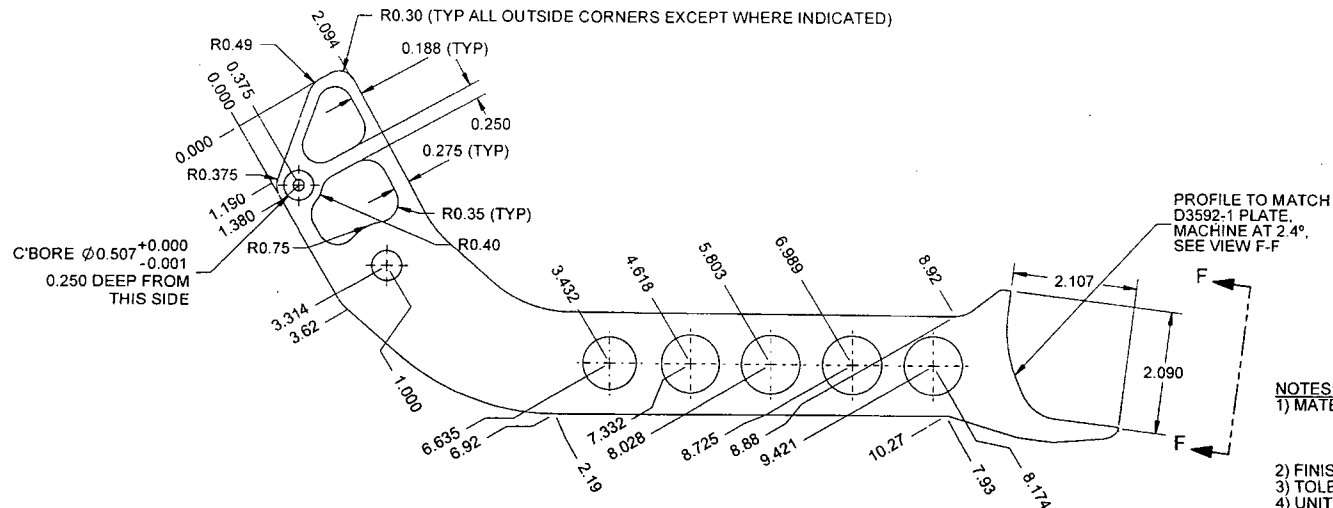


VIEW E-E
SCALE 1:1



RELEASED
10 JUL 1990

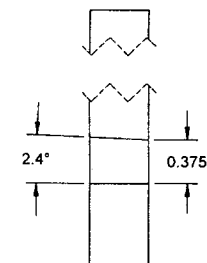
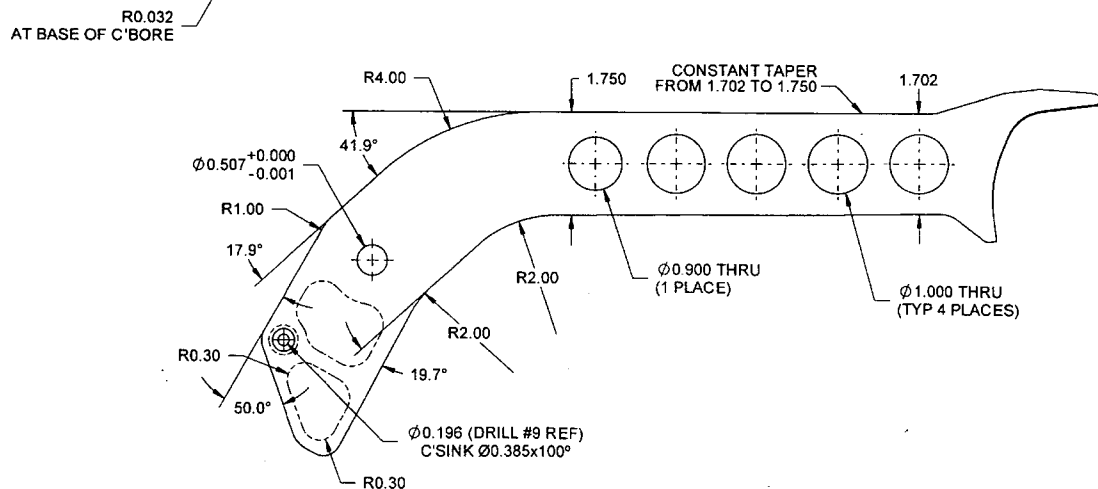
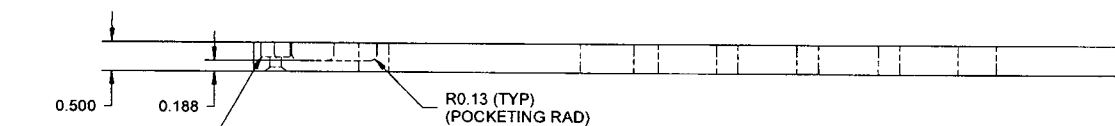
DESIGN	D	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	4C		
CHECKED	1	DRAWING NO. D3560	REV. D
MFG. APPR.	1	SHEET 4 OF 5	
APPROVED	1	TITLE	SCALE
DE APPR.	1	ARM WELDMENT	1:2
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



D3560-4 ARM

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR PER AMS-QQ-A-200/8 (OR AMS 4160) (REF. DART SPEC. M6061T6B0.500)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.05 lbs



VIEW F-F
SCALE 1:1

DESIGN	JP	DART AEROSPACE LTD	
DRAWN	EC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JP	DRAWING NO.	REV. D
MFG. APPR.	JP	D3560	SHEET 5 OF 5
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	ARM WELDMENT	1:2
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD	
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